

# QAPP AMENDMENT FORM

## IRRIGATED LANDS REGULATORY PROGRAM

**COALITION NAME:** EAST SAN JOAQUIN WATER QUALITY COALITION

**WDR ORDER #:** R5-2012-0116\_R3

**QAPP VERSION:** 3.0

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**TITLE:** Change in Subcontracted Sediment Laboratory for Grain Size and TOC

**SECTION OF QAPP AFFECTED** The QAPP sections affected are the tables referencing the analysis of sediment total organic carbon (TOC) and grain size including QAPP Tables 2, 13, 15 and 16. Caltest Laboratory analyzes the Coalition's sediment samples for pyrethroids, piperonyl butoxide (PBO) and chlorpyrifos and subcontracts to another laboratory for grain size and total organic carbon (TOC). Caltest is changing the subcontracted laboratory from PTS Laboratories to Soil Control Laboratories (SCL).

**JUSTIFICATION:** Caltest will be subcontracting the analysis of sediment TOC and grain size to SCL, located in Watsonville, California. SCL is an accredited laboratory that can meet the requirements outlined within the ILRP QAPP Guidelines document.

**DETAIL OF CHANGES:** Tables 1-4 include the QAPP updates with changes highlighted yellow; changes will affect QAPP Tables 2, 13, 15, and 16. Main changes include an update to the subcontracted laboratory from PTS to SCL and updates to the TOC and Grain Size methods.

Appendix XXIII and XXIV have also been updated to include SCL's Standard Operating Procedure (SOP) for the methods used to analyze sediment TOC and grain size.

**Table 1. Updates to the constituents and parameters table (Table 2).**

CONSTITUENT	MATRIX	ANALYZING LAB	METHOD	ANALYSIS TYPE
Sediment				
Total Organic Carbon	Sediment	Caltest <sup>3</sup>	EPA 9060	Automatic Combustion Analyzer
Grain Size	Sediment	Caltest <sup>3</sup>	Plumb 1981	Sieves and Pipettes

<sup>3</sup>Subcontracted to SCL.

**Table 2. Updates to the Field and laboratory analytical methods table (Table 13).**

CONSTITUENT	MATRIX	ANALYZING LAB	WQTL	RL	MDL	ANALYTICAL METHOD		
						METHOD	SOP/APPENDIX	MODIFIED FOR METHOD
Sediment								
Total Organic Carbon	Sediment	Caltest <sup>5</sup>	NA <sup>1</sup>	200 mg/kg	100 mg/kg	EPA 9060	Appendix XXIV	No
Grain Size	Sediment	Caltest <sup>5</sup>	NA <sup>1</sup>	0.01%	0.01%	Plumb 1981	Appendix XXIII	No

<sup>5</sup> Subcontracted to SCL.

**Table 3. Updates to the Field Sampling QC (Table 15).**

SAMPLE TYPE	FREQUENCY	ACCEPTABLE LIMITS	CORRECTIVE ACTION	SAMPLING SOP	ANALYTICAL SOP & METHOD
Sediment TOC					
Field Duplicate	5% annual total	RPD ≤25%	Determine cause, take appropriate corrective action.	Appendix I	Appendix XXIV; EPA 9060
Sediment Grain Size					
Field Duplicate	5% annual total	RPD ≤25%	Determine cause, take appropriate corrective action.	Appendix I	Appendix XXIII; Plumb 1981

**Table 4. Updates to the Analytical QC (Table 16).**

SAMPLE TYPE	FREQUENCY	ACCEPTABLE LIMITS	CORRECTIVE ACTION	SAMPLING SOP	ANALYTICAL SOP & METHOD
Sediment TOC					
Lab Blanks (method, reagent, instrument)	1 per 20 samples, minimum 1 per batch	Detectable substance contamination <RL or <30% of lowest sample	Identify and eliminate contamination source. Reanalyze all samples in batch. Qualify data as needed.	Appendix I	Appendix XXIV; EPA 9060
Lab Control Spike, CRM, or SRM	1 per 15 samples,	Within 95% confidence interval of the certified value; if not certified within 20-25% consensus value	Review raw data quantification reports. Check instrument response using calibration standard. Recalibrate and reanalyze CRM and samples. Repeat until control limits are met.		
Lab Duplicates	1 per 20 samples, minimum 1 per batch	RPD ≤20%	Check calculations and instruments. Recalibrate and reanalyze. If problem persists, then identify and eliminate source of imprecision and reanalyze.		
Sediment Grain Size					
Lab Duplicates	1 per 12 samples,	RPD ≤20%	Check calculations and instruments. Recalibrate and reanalyze. If problem persists, then identify and eliminate source of imprecision and reanalyze.	Appendix I	Appendix XXIII; Plumb 1981
Lab Control Spike, CRM, or SRM	1 per 20 samples, minimum 1 per batch	NIST SRM 1003b glass spheres and a narrow-sized garnet standard supplied by the instrument mfr. used as SRM	Review raw data quantification reports. Check instrument response using calibration standard. Recalibrate and reanalyze CRM and samples. Repeat until control limits are met.		